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CENTRAL INTELLIGENCE AGENCY
WASHINGTON, D.C. 20505

24 February 1976

MEMORANDUM FOR: The Director of Central Intelligence

SUBJECT : WARSAW PACT JOURNAL: Actions of the Skeleton Troops During the Operational Command-Staff Exercise SOYUZ-74

1. The enclosed Intelligence Information Special Report is part of a series now in preparation based on articles from a SECRET Soviet publication called Information Collection of the Headquarters and the Technical Committee of the Combined Armed Forces. This article reviews the SOYUZ-74 command-staff exercise held in Hungary and Czechoslovakia in May 1974 with the participation of skeleton troops from those countries and the USSR. The first phase of the exercise included defensive operations and an assault crossing of the Danube River; the second phase consisted of the restoration of the combat effectiveness of troops following a nuclear attack. Tactical-special exercises were conducted in the repair and rehabilitation of combat equipment, restoration and decontamination of railroad installations and equipment, mechanized reconstruction of a rail line, and assembly of a highway bridge with metal sections. Another tactical exercise dealt with the seizure and destruction of nuclear land mines. The engineer preparation of a forward command post using special shelters and equipment was demonstrated by the Czech Army. This journal is published by Warsaw Pact Headquarters in Moscow, and it consists of articles by Warsaw Pact officers. This article appeared in Issue No. 8, which was published in 1975.

2. Because the source of this report is extremely sensitive, this document should be handled on a strict need-to-know basis within recipient agencies. For ease of reference, reports from this publication have been assigned the [redacted] Codeword [redacted].

William E. Nelson
Deputy Director for Operations

[redacted]

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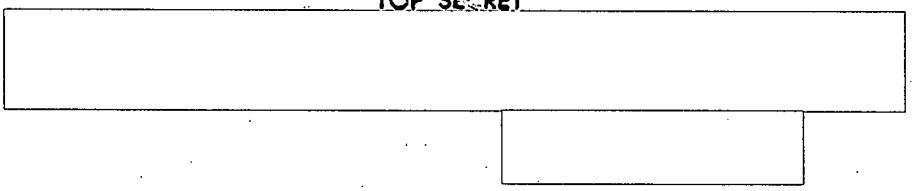

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Intelligence Information Special Report

COUNTRY USSR/WARSAW PACT

DATE OF INFO. May 1974

DATE 24 February 1976

SUBJECT

WARSAW PACT JOURNAL: Actions of the Skeleton Troops During the Operational Command-Staff Exercise SOYUZ-74

SOURCE Documentary

Summary:

The following report is a translation from Russian of an article from a SECRET Soviet publication called Information Collection of the Headquarters and the Technical Committee of the Combined Armed Forces. This journal is published by Warsaw Pact Headquarters in Moscow, and it consists of articles by Warsaw Pact officers. This article was written by General-Leytenant K. Arsenyev, Colonel V. Sopot, and Colonel V. Zhilenkov. This article reviews the SOYUZ-74 command-staff exercise held in Hungary and Czechoslovakia in May 1974 with the participation of skeleton troops from those countries and the USSR. The first phase of the exercise included defensive operations and an assault crossing of the Danube River; the second phase consisted of the restoration of the combat effectiveness of troops following a nuclear attack. Tactical-special exercises were conducted in the repair and rehabilitation of combat equipment, restoration and decontamination of railroad installations and equipment, mechanized reconstruction of a rail line, and assembly of a highway bridge with metal sections. Another tactical exercise dealt with the seizure and destruction of nuclear land mines. The engineer preparation of a forward command post using special shelters and equipment was demonstrated by the Czech Army. This article appeared in Issue No. 8, which was published in 1975.

End of Summary

Comment:

General-Leytenant K. I. Arsenyev was identified as a member of the editorial board of the Information Collection in 1972. Colonel V. Sopot contributed to an article entitled "The Status and Development of the Training Materiel Resources of the Ground Forces" in Issue No. 7

Actions of the Skeleton Troops During the Operational Command-Staff Exercise SOYUZ-74

by
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Colonel V. Sopot,
Deputy Chief of the Combat Training Branch
Colonel V. Zhilenkov,
a senior officer of the Combat Training Branch

In May 1974 on the territory of the Hungarian People's Republic and the Czechoslovak Socialist Republic there was conducted an operational command-staff exercise in the field with means of communications and skeleton troops under the code name SOYUZ-74. Taking part in it were staffs and troops of the Hungarian People's Army, the Armed Forces of the USSR, and the Czechoslovak People's Army.

The actions of the skeleton troops in the exercise were carried out within an overall operational-tactical setting in conformity with the decisions of the formation commanders and the plans of the operations. This permitted more detailed working out of the matters of organizing cooperation, supporting combat actions, and controlling troops in a situation approaching combat conditions. The directing body had the opportunity to objectively evaluate the decisions made, the correctness of the calculations performed, and also the level of training of units and subunits.

During the course of the command-staff exercise there were conducted three combined-arms tactical exercises and eight tactical-special (special) exercises, in which there were accomplished tasks connected with repulsing the invasion of an enemy, going over to the offensive, eliminating the aftereffects of the employment of nuclear weapons, restoring the combat effectiveness of troops and disrupted lines of transportation, developing an offensive with the assault crossing of water obstacles, negotiating obstacles, and seizing and deactivating nuclear land mines.

For the beginning of the combined-arms tactical exercises there was created a situation during which the "East", repulsing the strikes of

superior enemy forces, went over to the offensive with their main forces. The enemy, striving to hold back the offensive of the "East", moved up his operational reserves from the depth and prepared a counterstrike on the boundary between two armies operating on the main axis.

Under these conditions, one of the divisions of the Hungarian People's Army, advancing in the first echelon of the army, received the task to go over to the defense, repulse the enemy counterstrike, and be in readiness to renew the offensive.

To accomplish this task, from the Hungarian People's Army there were actually allocated: the headquarters of a division and of a motorized rifle regiment with the support subunits, one motorized rifle battalion, a tank company, an artillery battery, a battery of a tank-destroyer artillery regiment, a combat engineer platoon, and a flight of helicopters.

The decision of the division commander provided for temporarily going over to the defense with two motorized rifle regiments and continuing the offensive on the flank of the division with one motorized rifle regiment. The battle formation was set up in two echelons: in the first echelon were three motorized rifle regiments; in the second echelon, a tank regiment.

In the decision were determined the areas which had to be held for the stability of the entire defense of the division. Provision was made for hitting the enemy on the distant approaches to the defense and during the battle for holding the forward edge, and, in case of penetration into the defense, for reestablishing the lost position by carrying out counterattacks. Wide employment of engineer obstacles in combination with a well-organized system of fire considerably increased the stability of the defense.

The division commander provided for the possibility of employing nuclear weapons to break up the enemy offensive, and also for measures to eliminate the aftereffects of a nuclear attack.

Control of the units of the division was carried out from the command post, which was located in the defensive sector of the central regiment and occupied an area up to two square kilometers. In its composition it had a control group, which included the commander of the division, the chief of staff, the chiefs of branch arms and services with the necessary officers, a communications center, and a support group. The main part of the forces and means of control were located in armored installations. Locating the elements of the command post with consideration for the relief of the

terrain and using prefabricated sections to prepare shelters increased the survivability of the command post and the stability of control. The division commander had close contact with the staff officers, received the necessary information from them in good time, and carried out continuous control of the troops.

The commander of the motorized rifle regiment, in conformity with the task received, after evaluating the role and place of the regiment in the defense of the division, quickly made a decision, assigned the tasks to the subordinate and attached subunits in a short time, and coordinated their actions by lines, by probable axes of advance of the enemy, by tasks, and by axes of counterattacks. Carried out especially carefully was the coordination of the actions of the motorized rifle subunits with the artillery and the subunits of antitank guided missiles, tanks, and other antitank means. Simultaneously with the assigning of combat tasks, the commander of the regiment issued to the subunits instructions on cooperation.

The disposition of the defense of the motorized rifle battalion operating in the exercise and the grouping of its forces and means corresponded to the concept of actions and supported the fulfilment of the combat task and the stability of the defense.

Company strong points were laid out in conformance with the relief of the terrain, received engineer preparation for all-round defense, and were well camouflaged. The system of fire was well thought out. Artillery antitank fire in combination with engineer obstacles interdicted the most probable axes of advance of enemy tanks.

During the conduct of the defensive battle, the personnel of the motorized rifle companies and the attached subunits acted with assurance, repulsing the attacks of the enemy infantry and tanks. In the process, strikes were delivered by fire support helicopters against the subunits that had advanced, combat was conducted against low-flying air targets (including enemy helicopters), fires caused by the use of incendiary means were extinguished in the battalion defensive area, and also the maneuver of forces and means from main to reserve positions was carried out.

As a result of the aggressive actions of the defending units, the counterstrike grouping of the enemy sustained heavy losses and failed to attain success. It was defeated by the commitment of the second echelon of the army, and the units of the division of the Hungarian People's Army went over to the offensive.

By this time, the large units of the "East", developing an offensive on the main axis, had come with their forward units to a wide water obstacle.

To work out matters of the assault crossing of the Danube River from the march and developing an offensive in the operational depth, there was conducted, with a motorized rifle division of the Soviet Army, a tactical exercise to which were allocated: the headquarters of a division and of a motorized rifle regiment with support subunits, a motorized rifle battalion, a tank company, an artillery battalion, an antitank guided missile battalion, a reconnaissance company, a pontoon bridge regiment, a combat engineer company, a platoon of amphibious carriers, a platoon of self-propelled ferries, and a road and bridge construction company, and also a pontoon bridge battalion of the Hungarian People's Army.

In the situation that had developed, during the pursuit of the retreating enemy, the division received the task to make an assault crossing of the Danube River from the march on a wide front, to defeat the enemy subunits defending the opposite bank, and, developing the offensive in a westward direction, to ensure the crossing of the main forces of the army.

The division commander had made a decision for an assault crossing beforehand, but, with the approach of the forward detachment to the river, he refined the procedure for employment of nuclear weapons, the tasks for the units, the assault crossing sectors, and the procedure for carrying out preparatory fire and fire support of the offensive.

The decision of the division commander provided for hitting the retreating units of the enemy and employing the forward detachment for purposes of supporting the assault crossing of the river from the march on a wide front by the main forces of the division. For this purpose, provision was made to set up ten amphibious and ferry crossing points and subsequently to build a floating bridge from a PMP pontoon bridge park.

To effectively neutralize the enemy on the opposite bank, wide use was made of tanks moved up to the water's edge for direct fire and maneuver of artillery fire from indirect fire positions to prevent the approach of enemy reserves.

Reconnaissance of the river and the approaches to it was organized and purposefully conducted. In the assault crossing sector of the motorized rifle regiment were operating two reconnaissance groups of the division,

two reconnaissance groups of the regiment, one engineer reconnaissance group of the pontoon bridge regiment, and two combat reconnaissance patrols of battalions. The reconnaissance groups, having in their composition combat engineer reconnaissance personnel, crossed to the opposite bank in their T/O&E combat vehicles (BMP infantry combat vehicles, PT-76 amphibious tanks, and BRDM armored reconnaissance patrol vehicles).

The assault crossing of the river was begun by the vanguard battalion in BMP infantry combat vehicles, reinforced with a tank company, an artillery battalion, an antitank guided missile battery, a reconnaissance company, a combat engineer company, and crossing means. The approach of the subunits to the river went off in an organized manner and at high speeds. Passages were quickly made through obstacles both on the approaches to the river and in the water. The provost and traffic control service acted with precision.

The motorized rifle companies of the battalion made an assault crossing of a river over 500 meters wide (the Danube) in seven minutes. During the period of the assault crossing of the river, the BMP infantry combat vehicles while swimming conducted fire with guns, hull machineguns, and antitank guided missiles. Antiaircraft cover was carried out by the STRELA-2 system surface-to-air missilemen in the combat vehicles of the company commanders.

Subunits of a pontoon bridge company of the Southern Group of Forces, in the course of five to six minutes prepared, from the PMP pontoon bridge park, ferry crossings with a carrying capacity of 160 and 80 tons, and ensured the crossing of the tanks and other means of reinforcement. On the 160-ton ferries, up to four medium tanks crossed simultaneously. A tank company (13 tanks) attached to the battalion was put across to the opposite bank in one trip. In the process, the pontoon subunits made wide use of the ferries in the water in shuttle fashion (without turning around at the banks), which considerably increased their traffic capacity.

The motorized rifle battalion with means of reinforcement made the assault crossing of the Danube River in 35 minutes.

For the crossing of the main forces of the division, the pontoon bridge subunits of the Hungarian People's Army and the Southern Group of Forces, through combined efforts, built a floating bridge 520 meters long with a carrying capacity of 60 tons. This work was performed in 23 minutes (Figure 1).

The actions of the skeleton troops confirmed the correctness of the calculations for the assault crossing of the river performed by the operational staffs, and they also demonstrated the high level of field training of the subunits and units allocated for the exercise.

In the second phase of the exercise, the "West", having failed to obtain success in actions with the employment of conventional means of destruction, went over to the employment of nuclear weapons.

As a result of the nuclear strikes, some large units of the "East" temporarily lost their combat effectiveness or were considerably weakened. In the areas of the disposition of troops, rear units and facilities, at airfields and transportation centers, in population centers and on the terrain there were formed extensive areas of destruction, obstructions, and radioactive contamination. For the most instructive and complete working out of the matters of restoring the combat effectiveness of troops and eliminating the aftereffects of enemy employment of nuclear weapons, during the command-staff exercise there were conducted tactical-special exercises with units and subunits of the Hungarian and Czechoslovak People's Armies.

With the skeleton troops of the Hungarian People's Army there were worked out the actions of subunits of a motorized rifle regiment that had been subjected to an enemy nuclear attack and the rendering of assistance to them with the forces and means of a composite detachment for elimination of the aftereffects of an enemy nuclear strike, and also the actions of the medical and the repair and rehabilitation battalions of a division and of a decontamination point in a center of mass casualties.

To work out these matters, from the Hungarian People's Army there were allocated: a motorized rifle battalion with a tank company and an artillery battery, a motor transport company of a motorized rifle regiment, the composite detachment of a regiment for elimination of the aftereffects of an enemy nuclear strike, the medical and repair and rehabilitation battalions of a division, and also a decontamination company of a chemical defense battalion of an army.

In this exercise, a situation was created in which the enemy delivered seven nuclear strikes (five aerial and two surface ones) on a motorized rifle division moving up from the depth for commitment to the engagement.

To restore the combat effectiveness of the units and subunits of the division and eliminate the aftereffects of nuclear strikes in areas of mass destruction, there were moved forward the above-indicated forces and means,

which set about the fulfilment of their tasks.

The composite detachment of a motorized rifle regiment was moved forward into the area of the center of mass casualties in 15 minutes after the delivery of the enemy nuclear strike. It consisted of five groups: radiation and chemical reconnaissance, decontamination, fire extinguishing, rescue of personnel, and repair and recovery.

The personnel of the detachment accomplished the most diverse tasks: they searched out, removed and carried the wounded and injured from the center, gave them first aid, carried out the evacuation of personnel, damaged combat equipment and motor vehicle and tractor equipment, etc. (Figure 2). Deserving attention were the actions of the fire extinguishing group. It was equipped with powder-type fire extinguishers and in a short time managed to localize and extinguish a considerable number of fires that had broken out in a center of mass destruction.

With the forces of a company of the chemical defense battalion of an army, in the area of a center of mass destruction was set up a decontamination point, at which decontamination treatment of personnel and decontamination of equipment and armament were conducted. On the decontamination treatment of personnel and the decontamination of equipment and armament of a motorized rifle battalion about 30 minutes was spent. Radioactive decontamination of clothing was done with the use of a high-power vacuum cleaner, which afforded a considerable shortening of the time in comparison with other methods of treatment. The experience showed that such vacuum cleaners can be used in dry weather also for radioactive decontamination of motor vehicle canopies and combat equipment covers.

Equipping the point with the necessary technical equipment allowed treating, in one hour, up to 500 men with weapons and up to 60 items of combat equipment (Figure 3).

To offer doctor's assistance and qualified medical first aid to the sick and wounded, and temporary hospitalization to the non-transportable wounded and to prepare them for subsequent evacuation, the separate medical battalion of a motorized rifle division was deployed near a center of mass destruction. The battalion had a decontamination section, a sorting and evacuation section, a hospital section, an operating and bandaging section, and a shock treatment section.

The T/O&E structure of such a battalion and the presence in it of qualified specialists and new equipment allow the carrying out, under field

conditions, of complex surgical intervention and shock treatment measures. In 24 hours the separate medical battalion is capable of receiving and offering skilled medical treatment to 400 to 500 wounded and sick with urgent indications.

The repair and rehabilitation of damaged technical equipment and armament was done by the separate repair and rehabilitation battalion of a division. It was deployed in an area of 1.5 square kilometers and had workshops for the repair of tanks, armored personnel carriers, motor vehicles, missile armament, artillery armament, and small arms, and also of chemical equipment and of means of communications.

Constituting the basis of each workshop were special motor vehicles with the necessary equipment for carrying out repair work. In this, various technical means and accessories were widely used, which allowed mechanizing most of the repair and rehabilitation work under field conditions, efficiently organizing the technical process by sectors, and ensuring a daily productivity of five to seven medium repairs of tanks, seven to nine of armored personnel carriers, and 15 to 18 of motor vehicles (Figure 4).

The organization and times of fulfilment by the units and subunits of measures to eliminate the aftereffects of enemy nuclear strikes ensured the timely fulfilment of tasks by the troops moving forward.

The tactical-special exercise conducted with skeleton units of the Hungarian People's Army confirmed the correctness of the calculations performed by the trainees.

Practice fulfilment of tasks to eliminate the aftereffects of enemy nuclear strikes and restore disrupted lines of transportation for the purposes of providing the troops with everything necessary was carried out by skeleton troops of the Czechoslovak People's Army in four tactical-special exercises. In conformity with the situation created, in the operational rear of a formation nuclear strikes destroyed a section of a railroad line and a highway bridge. This led to temporarily stopping the movement of trains and to part of the trains with equipment and armament being subjected to radioactive contamination.

Under these conditions, the road and railroad units and subunits of the Czechoslovak People's Army received the task, in cooperation with the civil defense forces, of restoring the installations and carrying out radioactive decontamination of the contaminated equipment.

With the forces and means of special contingents, there was set up a non-T/O&E point for decontamination of railroad equipment and freight (Figure 5).

The set of equipment of the decontamination point consists of four washing frames, five pumps, means for final treatment of the trains, and radiation monitoring instruments. This equipment is distinguished by the simplicity of its construction, and this allows it to be set up on any section of a railroad line where there is a source of water supply.

For setting up the set of equipment and the actual servicing of it during the radioactive decontamination of contaminated trains, a team of 23 men was allocated (based on the calculation of working in one shift). To set up the point took up to 3.5 hours, and to set up one frame, 15 minutes.

While carrying out the decontamination, the speed of the train at the point was five kilometers per hour. While doing this, a special solution was pumped into the first and third washing frames, and into the second and fourth, water under a pressure of seven to eight atmospheres. The expenditure of water with such treatment came to about 3,000 liters per minute. The most hard-to-reach places and the lubricated assemblies of the cars were treated by the personnel by hand with hoses.

After passing through the decontamination point, each item of railroad equipment underwent careful radiation monitoring. Experience shows that, for effective decontamination, a double or triple treatment of the train in this manner is necessary. In this case, the productivity of the decontamination point comes to 300 to 400 boxcars and flatcars per day.

In a tactical-special exercise there was carried out an unloading of equipment from the train on an unprepared section of a railroad line, including unloading with the use of a tie-level end-loading flatcar, a general-purpose metal ramp, and a PKhKh six-axle flatcar ramp.

Of most interest is the unloading of equipment with the aid of the special six-axle flatcar ramp with a load capacity of 60 tons, which is designed for loading and unloading combat equipment on an unprepared section of a railroad line. Forming part of the flatcar equipment set is a lifting device that allows quick unfastening and releasing of one of its two undercarriages.

Setting up the platform in working position was carried out by a work crew (seven to eight men) of the train personnel under the direction of the

assistant engineer of the train.

During the exercise (Figure 6), the entire job of readying the flatcar and unloading a troop train consisting of 25 items of combat equipment took 18 minutes (including eight for readying the flatcar and nine for unloading the train).

The simplicity of construction of the flatcar ramp, and the numerically small size of the crew to service it and prepare the descent allow planning beforehand and carrying out the unloading of a train with equipment in a short time on any section of a railroad line. The PKhKh flatcar-ramp is finding wide use in the Czechoslovak People's Army in the execution of operational troop movements. The personnel of the units and subunits are learning skilful use of it while working out the problems of the movement of troops by railroad.

Also interesting was the tactical-special exercise of subunits of a railroad regiment in reconstruction of a section of a railroad line with the use of a set of machines for mechanization of work.

Reconstruction of the destroyed section of railroad line was done by one railroad battalion, which actually fulfilled the following tasks: prepared the ballast layer, laid track sections, carried out dressing of the track, added to the ballast layer, dressed the track for height, and tamped ballast around the ties (Figure 7).

The main thing in preparing the ballast layer is creating the specified height and packing it down. To accomplish these tasks, wide use was made of a machine to dress the ballast layer (RD-1), a ballast feeder (LZS1-M), and a mobile walking ballast-tamping machine (KZ-1000).

Laying track sections (Figure 8) was done with the aid of a track-section track-layer (PKP-25/20), which is able to lay sections 25 meters long and weighing 20 tons. Its advantage consists in being able to move from place to place by highway.

Dressing of the track was done with a track-dressing machine with a productivity of 275 meters per hour.

The exercise conducted showed that one railroad battalion equipped with the equipment enumerated can reconstruct eight to ten kilometers of track with scattered centers of destruction and up to two kilometers with complete destruction.

With the provost and traffic control battalion there was carried out a tactical-special exercise in the assembly of a highway bridge with the use of MS metal sections.

Assembly of the bridge was done by sections, which were assembled into single spans and then, with the aid of equipment mounted on a truck, moved forward along a roller track from piling to piling.

The technical advantage of the highway bridge with MS sections (Figure 9) consists in the fact that the hydraulic pilings for firm contact with the bottom of the river can be raised or lowered. One bridge set provides a crossing 42 meters long with a carrying capacity of 60 tons. The time for preparation is one hour and 40 minutes.

At the same time, to check the correctness of the calculations and decisions of the trainees made in the course of the command-staff exercise, and also to work out the problems of negotiating a zone of obstacles and seizing nuclear mines, a tactical exercise was conducted with skeleton units of the Czechoslovak People's Army. It took place in a situation in which the troops of the first echelon of the army had approached an intermediate enemy defense line covered beforehand by a zone of obstacles and nuclear land mines. The zone included a system of barbed-wire obstacles, antitank ditches, reinforced concrete block obstacles, tree barriers, and nuclear land mines ready for detonation. All these obstacles and the approaches to the nuclear land mines were covered by minefields.

Having evaluated the situation that had developed, the division commander made a decision which was directed toward ensuring the quickest negotiation of the obstacle zone by the units and the creation of favorable conditions for breaking through the enemy defense line from the march. For this, in every regiment provision was made for establishing one or two detachments for reconnaissance, seizure, and destruction of the nuclear land mines.

The commander of one of the motorized rifle regiments of the first echelon, on the basis of the available data about the location of the nuclear land mines, assigned the task to the commander of a detachment to seize and destroy them. In doing so, he indicated the probable locations of the nuclear land mines, the line of commitment to battle and the time of arrival at it, the immediate task of the detachment and the axis of the subsequent advance, and the procedure for support and cooperation with the subunits of the first echelon of the regiment.

In this exercise, acting as the detachment for reconnaissance, seizure, and destruction of the nuclear land mine was a motorized rifle battalion reinforced with a tank company, a 122-mm howitzer battery, a combat engineer company, two special combat engineer squads, and a radiation and chemical reconnaissance squad. The main task of the detachment -- seizure and destruction of the nuclear land mine -- was accomplished by the reinforced motorized rifle company advancing in the center of the battalion, and the other two companies supported its action from the flanks.

By the commander's decision the following groups were established in the detachment: reconnaissance (a motorized rifle platoon, a combat engineer squad, a chemical and radiation reconnaissance squad), support (a motorized rifle and a tank platoon), obstacle-clearing (a tank platoon, two combat engineer squads, and two bridge layers), and destruction (a motorized rifle platoon and a combat engineer platoon provided with shaped charges and equipment sets to destroy nuclear land mines).

The actions of the detachment were supported by a regimental artillery group, which, besides accomplishing the usual tasks, neutralized with its fire the immediate security subunits of the nuclear land mines and also blinded the detonation control posts. To destroy the enemy guarding the nuclear land mines, combat helicopters were also allocated. Neutralization of the enemy in the depth of the defense was done by artillery fire and strikes of the fighter-bomber aviation.

In accordance with an established signal, the detachment began moving forward into the obstacle zone. During the movement, the detachment commander, using radio, refined the tasks for the subunits, transmitted new reconnaissance data about the location of the nuclear minefields and the most important installations and structures in the zone of actions, and also controlled the actions of the groups.

Ahead of the detachment was the reconnaissance group, behind that group moved the support and obstacle-clearing groups, and then the destruction group. Strong points and various obstacles were negotiated by the detachment successively by groups, strictly carrying out mutual fire support. For instance, an antitank ditch was quickly negotiated. The first to come to it was the reconnaissance group, which reported on its detection. Then the obstacle-clearing group moved forward, and its actions were covered by the tanks and motorized riflemen of the support group. Under cover of their fire, one bridge layer laid a track bridge, over which the reconnaissance group passed first, then the tanks of the support group

and the rest of the detachment (Figure 10).

The subunits negotiated the zone of reinforced concrete block obstacles in two ways. One passage was made by combat engineer subunits by exploding bangalore torpedoes, a second passage was made by direct fire on the obstacles from tanks at a distance of 300 to 400 meters. To destroy one obstacle required six or seven 100-mm rounds.

The subunits of the detachments acted successfully in negotiating a tree barrier, a minefield, and large centers of fires. The obstacle-clearing group was constantly supported by the tank and small arms fire of the support group and continually received reconnaissance information on all obstacles detected in the zone of action.

Under the fire cover of the tanks and motorized rifle subunits, the destruction group moved into the area of the detected hole with the nuclear land mine. With the use of ferromagnetic mine detectors, the location of the nuclear land mine was quickly determined and a local jamming generator set up to prevent detonation of the land mine by an enemy radio signal from a control post.

After performance of the necessary preparatory work, the nuclear land mine was destroyed by a shaped charge.

The coordinated and quick actions of the detachment in negotiating the obstacle zone and destroying the nuclear land mine ensured the successful movement of the advancing troops up to the intermediate line of defense and the breakthrough of it from the march.

Besides conducting tactical and tactical-special exercises, during the command-staff exercise of the Czechoslovak People's Army there was demonstrated the location and engineer preparation of the forward command post of an army. To equip it, industrially produced shelters were used. Arousing the greatest interest of the directing body of the allied armies was the shelter of the VESTA-Ts type. It provides protection of the staff personnel from the shock wave of a 40-kiloton nuclear burst within a radius of up to 700 meters and their continual presence in a zone of contamination for 48 hours.

The working area (Figure 11) is equipped for five men and has all the communications necessary for a formation commander (commander) to control the troops and direct the staff. It is equipped with a YELKA-1 computer and has a special control panel for the filtering-ventilating equipment and

the lighting, on which, in accordance with the situation, the appropriate ventilation and lighting conditions can be selected.

In front of the entrance to the working area and the exit from it, there are airtight chambers with equipment that allows ten individual decontamination treatments of personnel entering the working area.

The VESTA-Ts shelter is transported on a truck with a cross-country capability (the TATRA-813) equipped with a hydraulic device. This device provides full mechanization in setting the shelter into an excavation and in taking it out of the excavation and loading it on the platform of the truck. Besides that, the truck is equipped with a bulldozer attachment for digging out the excavations and covering the shelter with dirt (Figure 12).

The truck is served by two men who take one hour to set the shelter in an open excavation and cover it. To take the shelter out of an excavation and load it on the truck takes no more than one hour.

The VESTA-Ts shelter can be used repeatedly to equip the control posts of formations.

* * *

The tactical and tactical-special exercises conducted were, in our opinion, very instructive. They demonstrated the high level of the combat training of the troops of the allied armies participating in them. The skeleton troops successfully accomplished the tasks set before them and showed a good level of field training and high morale.

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Figure 1. Floating bridge built by the pontooneers of the Hungarian Army and the Soviet Army.

Figure 2. Evacuation of personnel from a center of mass casualties.

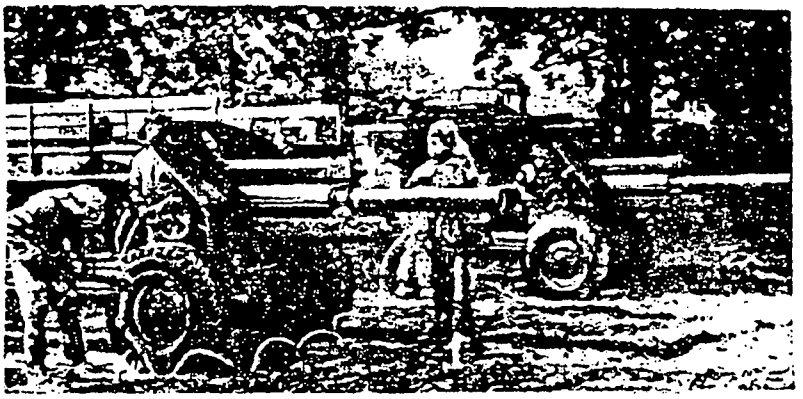

Figure 3. Decontamination of artillery equipment.

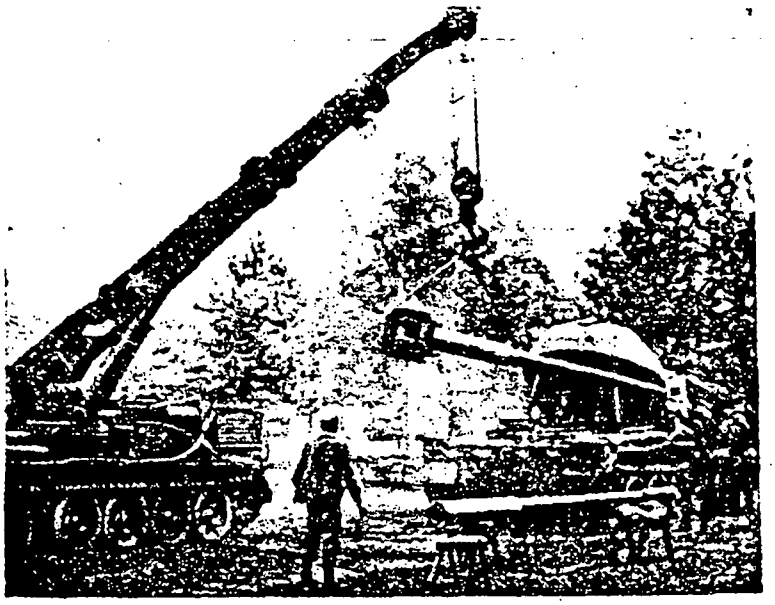

Figure 4. Repair work to rehabilitate armored equipment.

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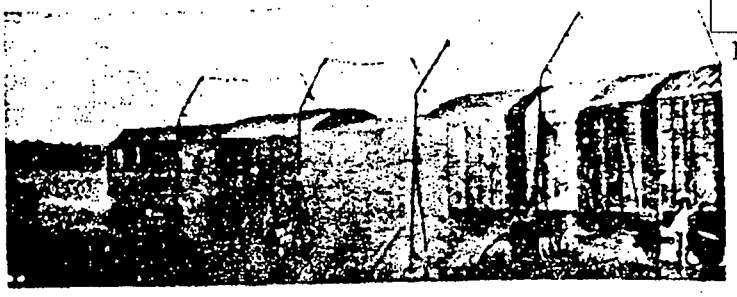

Figure 5. Operation of a decontamination point in treatment of a train.

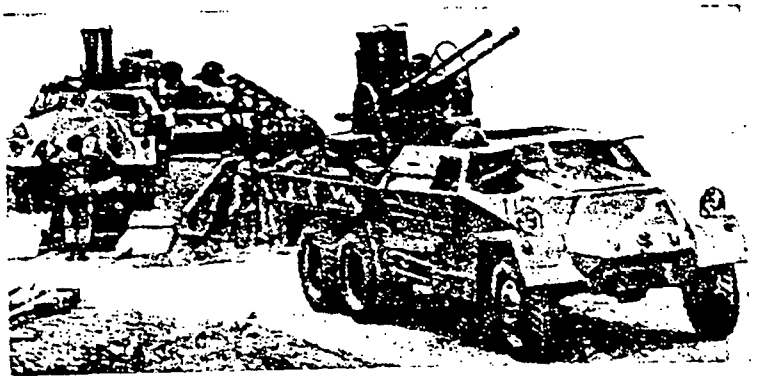

Figure 6. Unloading a troop train.

Figure 7. Preparation of the ballast layer.

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Figure 8. Laying of rail track sections.

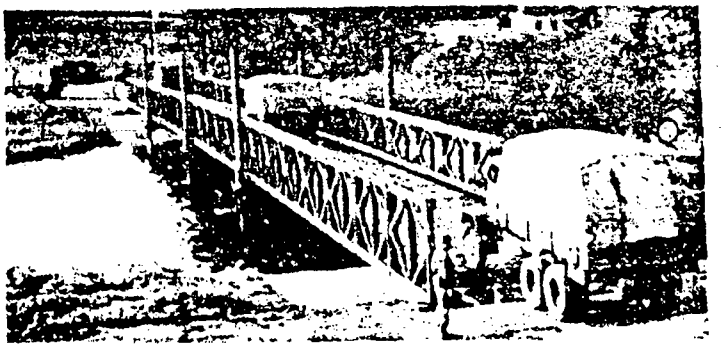

Figure 9. A highway bridge of MS structual elements.

Figure 10. Actions of the obstacle-clearing group are covered by tanks, armored personnel carriers, and helicopters.

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Figure 11. Working area of the VESTA-Ts shelter.

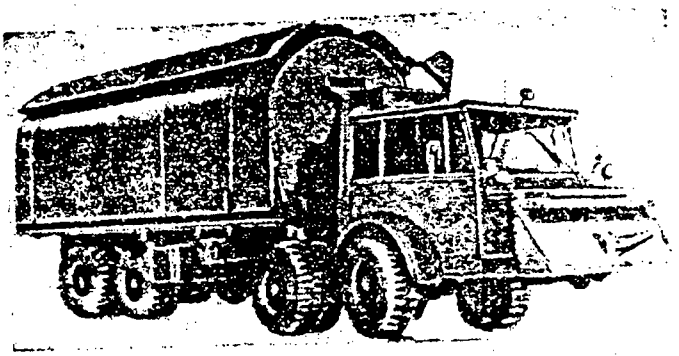

Figure 12. Transportation of the VESTA-Ts shelter on the TATRA-813 truck.